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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,336	08/27/2003	Ching-Huei Wu	WUCH3033/EM	5344
23364	7590	08/23/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			WON, BUMSUK	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/648,336	WU ET AL.	
	Examiner	Art Unit	
	Bumsuk Won	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No.

10/648,336, filed on 8/27/2003.

Oath/Declaration

2. Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an

application filed on 8/27/2003. Applicant has not complied with the requirements of

37 CFR 1.63(c), since the oath, declaration or application data sheet does not

acknowledge the filing of any foreign application. A new oath, declaration or application

data sheet is required in the body of which the present application should be identified

by application number and filing date.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Panel for organic electroluminescent device having integrated circuit, film, and printed circuit board.

Claim Objections

4. Claim 6 is objected to because of the following informalities: Claim 6, line 3, " of" should be " and" . Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-8, 10-13, 15-16, 18-20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinata (US 2002/0118325) in view of Endo (US 6,507,384), in further view of Lu (US 6,559,604).

Regarding claim 1, Hinata discloses a liquid crystal panel device, comprising:

a substrate (note figure 1, item 2) having a first conducting area (note figure 1, left portion of the substrate), a second conducting area (note figure 1, right portion of the substrate), a third conducting area (note figure 1, bottom portion of the substrate), and

Art Unit: 2879

an active area (note figure 1, remaining portion in the center and top where the electrodes (items 10 and 11) are located of the substrate);

wherein said active area locates between said first conducting area and said second conducting area; said third conducting area locates at one side of said active area; said first conducting area, said second conducting area, said third conducting area and said active area are integrated together on the surface of said substrate (note figure 1);

and said third conducting area (note figure 1, bottom portion of the substrate) locates adjacent to said first conducting area (note figure 1, left portion of the substrate), said second conducting area (note figure 1, right portion of the substrate), and said active area (note figure 1, remaining portion in the center and top where the electrodes (items 10 and 11) are located of the substrate);

a plurality of first conducting lines (note figure 1, item 14 on the left side of the substrate) located in said first conducting area on said substrate;

Art Unit: 2879

a plurality of second conducting lines (note figure 1, item 14 on the right side of the substrate) located in said second conducting area on said substrate;

a plurality of third conducting lines (note figure 1, item 15) located in said third conducting area on said substrate;

a plurality of first electrodes (note figure 1, item 10) located in said active area, wherein said first electrode connects a third conducting line;

a plurality of second electrodes (note figure 1, item 11) located in said active area, wherein said second electrode connects a first conducting line or a second conducting line;

wherein said first conducting line (note figure 1, item 14 on the left side of the substrate) connects a third conducting line (note figure 1, item 15), said second conducting line (note figure 1, item 14 on the right side of the substrate) connects a third connecting line (note figure 1, item 15), said first electrodes (note figure 1, item 10) don't directly connect (note figure 2, first electrodes (10) are separated from second

Art Unit: 2879

electrodes (11) by liquid crystal (23)) said second electrodes (note figure 1, item 11), and said first conducting lines (note figure 1, item 14 on the left side of the substrate), said second conducting lines (note figure 1, item 14 on the right side of the substrate), said third conducting lines (note figure 1, item 15) and said first electrodes (note figure 1, item 10) are on the surface of said substrate (note figure 1).

Hinata do not disclose organic electroluminescent medium located in said active area, wherein said organic electroluminescent medium is sandwiched between said first electrodes and said second electrodes.

Endo discloses liquid crystal display and organic electroluminescent display can be used interchangeably (note column 1, lines 8-10).

Lu discloses organic electroluminescent display panel (note figure 2) with at least one organic electroluminescent medium (note figure 2, item 30) located in said active area (note figure 1), wherein said organic electroluminescent medium (note figure 2, item 30) is sandwiched between said first electrode (note figure 2, item 20) and said second electrode (note figure 2, item 40), for the purpose of emitting brighter light.

Art Unit: 2879

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the EL medium structure (organic EL medium is sandwiched between first electrode and second electrode) of Lu in the display of Hinata in view of Endo, for the purpose of emitting brighter light.

Regarding claim 2, Hinata discloses a bonding unit (note page 8, paragraph [0125], lines 10-12, "wiring", and figure 10, item 360) located in said third conducting area (note figure 1, bottom portion of the substrate) for bonding at least one integrated circuit (note figure 10, item 124) or a cable (note figure 10, item 150).

Regarding claim 3, Hinata discloses integrated circuit (note figure 10, item 124) is bonded to said bonding unit (note page 8, paragraph [0125], lines 10-12, "wiring", and figure 10, item 360) through chip on glass (COG) sealing (note page 10, paragraph [0142], lines 1-2).

Art Unit: 2879

Regarding claim 4, Hinata discloses the number of said first conducting lines (note figure 1, item 14 on the left portion of substrate (item 2) shows 5 conducting lines that connect electrodes (item 11) and driver IC (item 7)) is equal to that of said second conducting lines (note figure 1, item 14 on the right portion of substrate (item 2) shows 5 conducting lines that connect electrodes (item 11) and driver IC (item 7)).

Regarding claim 6, Lu discloses an organic electroluminescent device with a pixel-defining layer (note figure 2, item 60) located between said organic electroluminescent medium (note figure 2, item 30) to define the pixel area and said first electrode (note figure 2, item 20) in said active area (note figure 1).

The reason for combining is the same as for claim 1 above.

Regarding claim 7, Lu discloses an organic electroluminescent device with a plurality of auxiliary electrodes (note figure 1, item 70) located on the surface of or

Art Unit: 2879

embedded in said first electrodes (note figure 1, item 20), and said auxiliary electrodes (note figure 1, item 70) are used to increase the current density of the first electrodes.

The reason for combining is the same as for claim 1 above.

Regarding claim 8, Lu discloses an organic electroluminescent device with a plurality of isolating walls (note column 5, line 53, "ramparts", and figure 2, item 50) located on the surface of said pixel-defining layer (note figure 2, item 60).

The reason for combining is the same as for claim 1 above.

Regarding claim 10, Hinata discloses a liquid crystal panel device, comprising:

a substrate (note figure 1, item 2) having a first conducting area (note figure 1, left portion of the substrate), a second conducting area (note figure 1, right portion of the substrate), a third conducting area (note figure 1, bottom portion of the substrate), and

an active area (note figure 1, remaining portion in the center and top where the electrodes (items 10 and 11) are located of the substrate);

wherein said active area locates between said first conducting area and said second conducting area; said third conducting area locates at one side of said active area; said first conducting area, said second conducting area, said third conducting area and said active area are integrated together on the surface of said substrate (note figure 1);

and said third conducting area (note figure 1, bottom portion of the substrate) locates adjacent to said first conducting area (note figure 1, left portion of the substrate), said second conducting area (note figure 1, right portion of the substrate), and said active area (note figure 1, remaining portion in the center and top where the electrodes (items 10 and 11) are located of the substrate);

a plurality of first conducting lines (note figure 1, item 14 on the left side of the substrate) located in said first conducting area on said substrate;

a plurality of second conducting lines (note figure 1, item 14 on the right side of the substrate) located in said second conducting area on said substrate;

a plurality of third conducting lines (note figure 1, item 15) located in said third conducting area on said substrate, said first conducting line (note figure 1, item 14 on the left side of the substrate) connects a third conducting line (note figure 1, item 15); said second conducting line (note figure 1, item 14 on the right side of the substrate) connects a third connecting line (note figure 1, item 15);

a plurality of first electrodes (note figure 1, item 10) located in said active area, wherein said first electrode connects a third conducting line;

a plurality of second electrodes (note figure 1, item 11) located in said active area, wherein said second electrode connects a first conducting line or a second conducting line.

a first film (note figure 10, item 150) embedded with a plurality of fourth conducting lines (not shown, however, it would be obvious to have any type of

Art Unit: 2879

conducting lines in the first film since the purpose of having first film is to conduct power or signal to main controller), wherein said fourth conducting lines are electrically connected (note figure 10, item 370) with said third conducting lines (note figure 1, item 15), at least part of the pins of an integrated circuit, or a combination thereof (note figure 10, first film is connected with item 370 which is connected with driver IC (item 124) and also connected with part of third conducting lines (item 360))

Hinata do not disclose organic electroluminescent medium located in said active area, wherein said organic electroluminescent medium is sandwiched between said first electrodes and said second electrodes.

Endo discloses liquid crystal display and organic electroluminescent display can be used interchangeably (note column 1, lines 8-10).

Lu discloses organic electroluminescent display panel (note figure 2) with at least one organic electroluminescent medium (note figure 2, item 30) located in said active area (note figure 1), wherein said organic electroluminescent medium (note figure 2,

Art Unit: 2879

item 30) is sandwiched between said first electrode (note figure 2, item 20) and said second electrode (note figure 2, item 40), for the purpose of emitting brighter light.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the EL medium structure (organic EL medium is sandwiched between first electrode and second electrode) of Lu in the display of Hinata in view of Endo, for the purpose of emitting brighter light.

Regarding claim 11, Endo discloses an electro-optical device comprising, in part, a printed circuit board (note figure 9, item 3), and said pins (note figure 9, item 12) of said integrated circuit (note figure 9, item 10) connect with said printed circuit board (note figure 9, item 3), for the purpose of mounting various types of electronic parts (note column 2, lines 20-22, and figure 9) so that the display device is functional.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a printed circuit board and pins of integrated circuit

Art Unit: 2879

connected with the printed circuit board disclosed by Endo in the display of Hinata, for the purpose of mounting various types of electronic parts so that the display device is functional.

Regarding claims 12 and 15, Endo discloses an electro-optical device wherein said pins (note figure 9, item 12) of said integrated circuit (note figure 9, item 10) and said printed circuit board (note figure 9, item 3) are connected through anisotropic conductive films (note column 2, lines 4-26).

The reason for combining is the same as for claim 11 above.

Regarding claim 13, Endo discloses an electro-optical device comprising, in part, a printed circuit board (note figure 9, item 3) and a second films (note figure 9, item 5), wherein part of said pins (note figure 9, item 14) of said integrated circuit (note figure 9,

Art Unit: 2879

item 13) connects with said second film (note figure 9, item 5), said printed circuit board (note figure 9, item 3) electrically connects said second films (note figure 9, item 5).

The reason for combining is the same as for claim 11 above.

Regarding claim 16, Hinata discloses the number of said first conducting lines (note figure 1, item 14 on the left portion of substrate (item 2) shows 5 conducting lines that connect electrodes (item 11) and driver IC (item 7)) is equal to that of said second conducting lines (note figure 1, item 14 on the right portion of substrate (item 2) shows 5 conducting lines that connect electrodes (item 11) and driver IC (item 7)).

Regarding claim 18, Lu discloses an organic electroluminescent device with a pixel-defining layer (note figure 2, item 60) located between said organic electroluminescent medium (note figure 2, item 30) to define the pixel area and said first

Art Unit: 2879

electrode (note figure 2, item 20) in said active area (note figure 1), for the purpose of isolating first and second electrodes.

The reason for combining is the same as for claim 10 above.

Regarding claim 19, Lu discloses an organic electroluminescent device with a plurality of auxiliary electrodes (note figure 1, item 70) located on the surface of or embedded in said first electrodes (note figure 1, item 20), and said auxiliary electrodes (note figure 1, item 70) are used to increase the current density of the first electrodes.

The reason for combining is the same as for claim 10 above.

Regarding claim 20, Lu discloses an organic electroluminescent device with a plurality of isolating walls (note column 5, line 53, "ramparts", and figure 2, item 50) located on the surface of said pixel-defining layer (note figure 2, item 60), for the

purpose of separating side-deposited cathode materials from anodes (note column 5, lines 52-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a plurality of isolating walls located on the surface of pixel-defining layer of Lu in the display of Hinata in view of Endo, for the purpose of separating side-deposited cathode materials from anode so that functional failure such as short circuit between cathode and anode does not happen.

Regarding claim 22, Endo disclose an electro-optical device comprising, in part, a plurality of fifth conducive lines (not shown, however, it would be obvious to have any type of conducting lines in the first film since the purpose of having first film is to conduct power or signal to main controller) embedded in said first film (note figure 9, item 4), wherein said fourth conducting lines (not shown, however, it would be obvious to have any type of conducting lines in the first film since the purpose of having first film

Art Unit: 2879

is to conduct power or signal to main controller) and said fifth conducting lines (not shown, however, it would be obvious to have any type of conducting lines in the first film since the purpose of having first film is to conduct power or signal to main controller) do not connect to each other directly (power lines and signal lines would not be connected directly for obvious reasons), part of pins (note figure 9, item 12) of said integrated circuit (note figure 9, item 10) electrically connects to said fourth conducting lines, and the other part of pins (note figure 9, item 10) of said integrated circuit electrically connects to said fifth conducting lines.

7. Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinata (US 2002/0118325) in view of Endo (US 6,507,384), in further view of Lu (US 6,559,604), in further view of Hsieh (US 2002/0177249).

Regarding claims 5 and 17, Hinata in view of Endo, in further view of Lu disclose all of the claimed limitations except for conducting lines are selected from Al, Cr, Ag, and alloys thereof.

Hsieh discloses a display panel that conducting lines (note figure 1A, item 12b) are aluminum (note page 1, paragraph [0006], line 2, "aluminum", and figure 1A, item 12b), for the purpose of conducting without too much voltage drop across the conducting lines.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use aluminum for conducting lines to connect electrodes disclosed by Hsieh in the display of Hinata in view of Endo, in further view of Lu, for the purpose of conducting without too much voltage drop across the conducting lines.

Art Unit: 2879

8. Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (US 6,507,384) and Hinata (US 2002/0118325) in view of Endo (US 6,507,384), in further view of Lu (US 6,559,604), in further view of Ogura (US 6,924,594).

Regarding claims 9 and 21, Regarding claims 5 and 17, Hinata in view of Endo, in further view of Lu disclose all of the claimed limitations except for a barrier cover located above said active area for preventing said organic electroluminescent medium from the moisture, oxygen, oxide, or sulfide in the air, and said cover is bonded with said panel through sealing.

Ogura discloses an electroluminescent panel that a barrier cover (note figure 1b, item 102) located above said active area (note figure 1b, item 106) for preventing said organic electroluminescent medium (note figure 1b, item 105) from the moisture, oxygen, oxide, or sulfide in the air, and said cover is bonded with said panel through sealing (note column 3, lines 28-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a barrier cover in an electroluminescent panel disclosed by Ogura in the display of Hinata in view of Endo, in further view of Lu, for the purpose of providing a structure into which moisture and oxygen are not introduced, thus increasing the lifetime of the panel.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over and Hinata (US 2002/0118325) in view of Endo (US 6,507,384), in further view of Lu (US 6,559,604), in further view of Holland (US 4,217,020).

Regarding claim 14, Regarding claims 5 and 17, Hinata in view of Endo, in further view of Lu disclose all of the claimed limitations except for an organic electroluminescent device comprising, in part, a printed circuit board and a film, wherein part of said pins extends from said integrated circuit and is embedded in said second

film, and said extended pins embedded in said second film connect to said printed circuit board.

Holland discloses a printed circuit board (note figure 2, item 26) and a film (note figure 2, item 34), wherein part of pins (note figure 2, item 36) extends from integrated circuit (note figure 2, item 20) and is embedded in film (note figure 2, item 34), and extended pins (note figure 2, item 36) embedded in film (note figure 2, item 34) connect to said printed circuit board (note figure 2, item 26), for the purpose of electrically connecting display panel with controller in the printed circuit board so that the display device is functional.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a printed circuit board and a film, wherein part of pins extends from integrated circuit and is embedded in film, and extended pins embedded in film connect to said printed circuit board in an organic electroluminescent device disclosed by Holland in the display of Hinata in view of Endo, in further view of Lu, for

Art Unit: 2879

the purpose of electrically connecting display panel with controller in the printed circuit board so that the display device is functional.

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hinata (US 2002/0118325) in view of Endo (US 6,507,384), in further view of Lu (US 6,559,604), in further view of Kawaguchi (US 5,400,221).

Regarding claim 23, Hinata in view of Endo, in further view of Lu disclose all of the claimed limitations except for said first film is a hard film for tape carrier package (TCP).

Kawaguchi discloses a hard film (note column 3, line 47, "PCB", and figure 2A, item 12) for tape carrier package (note column 3, lines 45-48, and figure 2A, item 4), for the purpose of having structural ruggedness in the film in order to achieve higher reliability of the panel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use first film as a hard film for tape carrier package disclosed by

Kawaguchi in the display of Hinata in view of Endo, in further view of Lu, for the purpose of having structural ruggedness in the film in order to achieve higher reliability of the panel.

11. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinata (US 2002/0118325) in view of Endo (US 6,507,384), in further view of Lu (US 6,559,604), in further view of Katsumata (US 6,826,016).

Regarding claims 24 and 25, Hinata in view of Endo, in further view of Lu disclose all of the claimed limitations except for further comprising plural electrically passive devices bonded on said fourth conducting lines on said first film, and electrically passive devices are capacitors or resistors.

Katsumata discloses film (note column 6, lines 44-47, "FPC, or flexible printed circuit board", and figure 14, item 52) with capacitors (note figure 14, item 96) bonded

Art Unit: 2879

on conducting lines (note figure 14, item 28), for the purpose of smoothing the power source (note column 1, lines 60-63) so that the electrical noise is lessened.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use capacitors or plural electrically passive devices bonded on conducting lines on a first film disclosed by Katsumata in the display of Hinata in view of Endo, in further view of Lu, for the purpose of smoothing the power source so that the electrical noise is lessened.

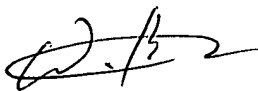
Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bumsuk Won whose telephone number is 571-272-2713. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bumsuk Won

Patent Examiner



JOSEPH WILLIAMS
PRIMARY EXAMINER